NAEM

MARCH 2019

Why Companies Replace Their EHS&S Software Systems

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About this Report

Purpose

The decision to replace an EHS&S data management system is not an easy one, given the significant investment of time, cost and change management that software implementations require. It's not surprising, then, that companies may postpone a system replacement until the burden of maintaining an existing system start to outweigh the benefits of starting afresh.

What does that decision point look like from a company's perspective? This report sheds light on this question by revealing the reasons why companies return to the market and exploring the underlying management challenges that often lead to issues with the customer experience. The results also provide EHS&S leaders with insights they can use to spot early signs of user disengagement, diagnose issues with how they are managing their system, and, if need be, successfully lead a new selection process.

Research Overview

NAEM has been tracking how companies implement and leverage EHS&S data management systems since 2001. Many of NAEM's early benchmarking projects addressed the needs of first-time buyers, who were primarily interested in learning how to frame their business objectives, set a budget and manage the implementation process.

In the past five years, the solutions marketplace has greatly matured along with the penetration of commercial EHS&S systems into companies. As such, many EHS&S leaders today have experience working with at least one software solution, and are more knowledgeable about the mechanics of the selection process. With everything that we now know about what it takes to optimize a system selection, why do some companies find themselves back in the market again?

To get at this question, NAEM initiated a new research survey in December 2018, focused on the needs of returning software customers. The survey questionnaire was based on NAEM's knowledge of the key software purchase drivers, system attributes and functionality needs, as well as a new set of questions that compared the satisfaction of those who are considering switching to a new software solution versus those who are retaining their existing technology.

About this Report

Those who are shopping for a new system were asked why they were returning to the market and what the most important criteria are for the new system they seek. All respondents were asked to rate the attributes of their current system on a 1-5 scale with 1 being "not satisfied" and 5 being "very satisfied". Their responses to the survey and their open-ended comments are integrated into the report as one piece of our analysis.

The quantitative results in this report are based on 61 completed survey responses: 27 companies who are shopping for a new system and 34 companies who are not.

In addition, we conducted one-on-one interviews with in-house EHS&S leaders and software implementation experts to further illuminate the management challenges surrounding a software switch.

By sharing their perspectives with us, the contributors and their respective companies are neither responsible for the outcome of our findings, nor explicitly endorse the veracity of the results.

Why Companies Want to Replace Their EHS&S Software System

Software implementation projects are costly and time-consuming, and companies don't approach them lightly. So what if your organization has already committed time, money and resources toward implementing a specialized EHS&S software system, and that solution is no longer working?

The idea of scrapping the investment your company has made in its existing system can be very unpopular with both management and users. However, if you've passed the frustration or inefficiency tipping point , it might be time to take action.

Through a 2019 survey of 61 software customers and interviews with experts, we heard from many EHS&S leaders who are thinking about changing their systems, a few who have already made a change, and consultants who have seen all manner of EHS&S data problems and solutions.

We asked them about the recent history of their EHS&S systems, what issues were driving them back to market, the obstacles they needed to overcome, and the solutions they were considering and why.

Where are the biggest gaps in satisfaction?

The below chart compares user satisfaction between two groups of software users: those who are shopping for new software systems and those who are not. The data represents those who rated their system as a 4 or 5 on a 1-5 scale, in which 1 was "not satisfied" and 5 was "very satisfied". The data is sorted by the largest satisfaction differences between user groups.

Software Shoppers % Satisfied	**Software Attributes**	**Not Shopping for Software** % Satisfied
7%	**User interface**	56%
7%	**Customer service**	50%
11%	**Flexibility of configuration**	50%
4%	**Performs as we expected it to**	41%
15%	**Overall user experience**	47%
7%	**User engagement**	38%
7%	**Flexibility of customization**	38%
33%	**Costs of ongoing maintenance**	56%
22%	**Updates**	44%
11%	**Integration with other business IT systems**	29%
N=27		N=34

Source: NAEM's 2019 Why Companies Replace their EHS&S Software System

Those we interviewed also brought up many reasons their companies (or clients) changed systems. While the software system itself is a convenient scapegoat for frustration, we discovered that some problems that caused software systems to become ineffective were rooted elsewhere.

You may see your own company's data problems in their stories, and you may find solutions that will help your own organization move forward.

System Doesn't Perform as Advertised

One of the biggest issues that can sink satisfaction is when customers feel that the product was oversold. It's easy to be distracted by a new system's bells and whistles or a salesperson's enthusiasm. And it's not always possible for salespeople to predict how well a system can handle individual data scenarios or what future updates will offer.

If this happens, a customer may feel like they were misled, and the software either doesn't do what the vendor claimed, or it requires so much customization to perform as desired that it comes at a much higher, ongoing cost than they expected.

"If possible," one user advised, "ask to see systems that existing customers have in place. Be wary if a vendor says, 'We can do that' ... Instead, have them show you that they already do what you want it to do."

The Journey Back to the Software Market

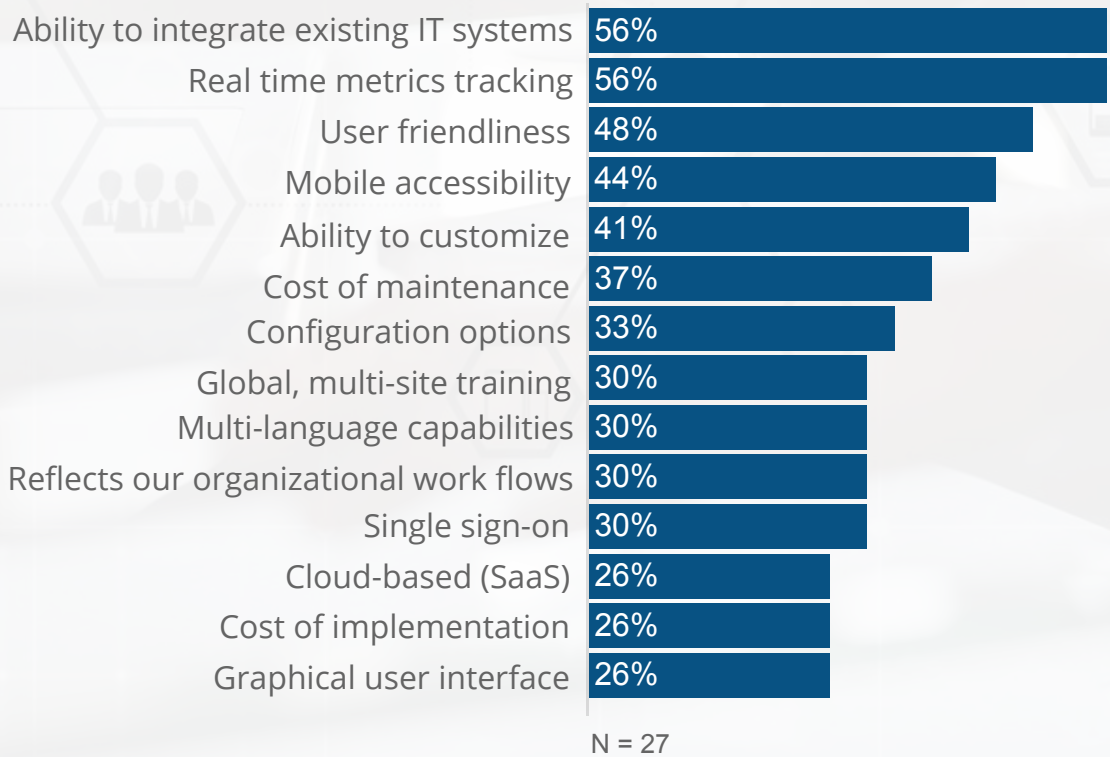
An Unmet Need Prompts a Change

There are typically a number of factors that trigger dissatisfaction with a selected software system. The following is a rank order of the key reasons, according to NAEM survey respondents.

- **Our current system doesn't perform as advertised**
- **We have a new business objective that the current system**
- **Our current system costs too much to maintain**
- **Our current system doesn't integrate well with other business IT systems**
- **The platform we are using has changed**

Companies Seek New Functionality

When customers return to the market, they take a fresh approach to defining their priorities and desired functionality. The following are the most important criteria for those shopping for a new software system.



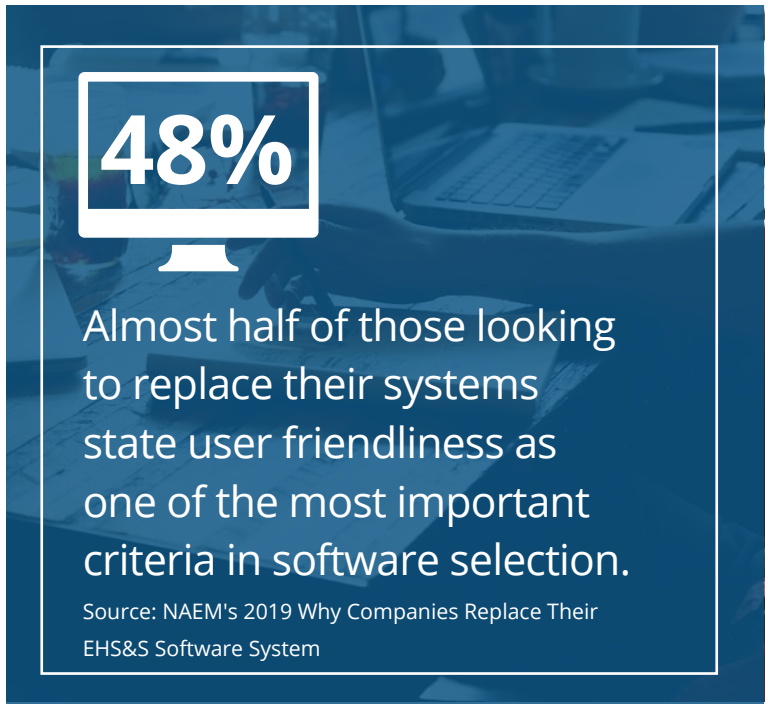
N = 27

Source: NAEM's 2019 Why Companies Replace Their EHS&S Software System

Users Don't Engage

Perhaps the most telling sign that your system isn't working is that users failed to, or no longer, engage with the software. Among the 27 software shoppers surveyed by NAEM in 2019, 48 percent said "user friendliness" is one of the most important selection criteria when it comes to buying new software. After all, if the software system is less intuitive or designed differently than systems they are used to using, it can have a big impact.

One software expert, for example, had a client who discovered that many users were still using paper forms and entering the data later (double effort). Others were were using workarounds that also resulted in many ad hoc changes to the data as it was entered. The consultant estimated that these inefficiencies, along with the lack of accurate reporting was costing this client $10 million per year.



Another situation that can trigger user frustration is when employees have trouble getting the data out of the system.

If left unaddressed, it can lead to a scenario that one EHS&S expert unwittingly discovered at a client company.

In this case, an employee was describing an incident that should have been reported in the EHS&S system, and the expert realized that it was not entered correctly, and in other instances they discovered later some incidents weren't entered at all and users weren't using the system correctly at all.

To address such user experience issues as these, one EHS&S software expert has even resorted to helping clients migrate away from commercial systems to basic tools such as SharePoint, which he said some users find easier to navigate.

"When the system is easy to use and understand, users are more likely to use it," the participant said.

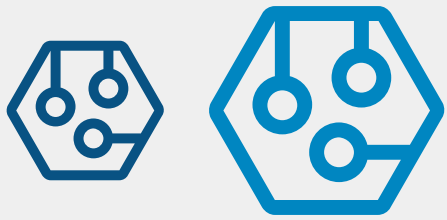
Needless to say, the way users use — or don't use — a system can undermine data accuracy, reporting assurance and the entire value proposition of the software investment.

Issues with Integration

Integration isn't always the first thing most companies ask about when vetting software systems, but among respondents to NAEM's 2019 survey, it was the top purchase criteria among those shopping for new systems. It also came up in nearly every conversation we had with EHS&S experts. Experts say it's easy to underestimate the challenge of integrating with hardware, other EHS software, ERP software, global systems, analytics tools, legacy software and emerging technologies.

"I think that the ideal solution is not one single system, but more than one, therefore software packages (EHS&S, finance, HR, etc.) all need to integrate better. Even two different EHS software packages should integrate better," one EHS&S leader said.

Several EHS&S experts have come around to the idea of utilizing more than one system — addressing some functions with one software system, and other functions with another — and using integration to avoid extensive customization. No matter what the solution is, one major component of planning for the future should be examining how well software integrates with just about everything.



Integrating Software into IT Systems Has Grown in Importance

In 2017, 25 percent of responding companies ranked the ability to integrate existing IT systems with EHS&S software as one of their top five most important criteria for software selection. In 2019, integration with other business IT systems was the top criteria, at 56 percent among survey respondents.

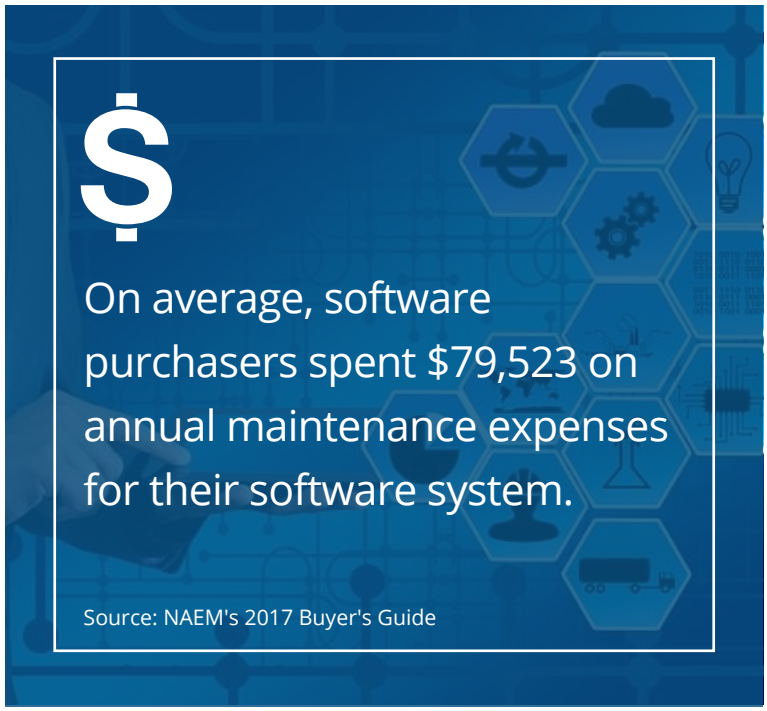
Source: NAEM's 2019 Why Companies Replace Their EHS&S Software System & 2017 Buyer's Guide

Updates and Maintenance Costs

Unsurprisingly, customizations can create major issues with platform updates and ongoing maintenance. As workflows or requirements change, vendors charge more to continue to customize, and there could be no end in sight; the more companies have their solution customized, the more they become tied to that solution because they continue to sink money into it.

One EHS&S leader who works at a decentralized company had some exceptionally extreme update issues.

"[Our EHS&S software] has many update challenges. There are 272 different applications across our company. There was a big update from version 5 to 6 and each application had to be upgraded individually as a separate project. [That's] 272 upgrade projects. We are in the midst of trying to do this years-long process, so some systems are on version 5 and some on 6, which adds to user issues and inconsistencies."



Another expert who advises clients on EHS&S software related a similar set of experiences.

"I have had many clients who remain chained to a solution due to costs of implementation and maintenance. They have invested so much that they can't abandon the system, and each year it grows worse. Companies have to decide where the line is between where they will write off the money already invested and start over, or adjust their expectations and find a way to address outstanding processes that are not covered by current software."

At what point do companies toss the old solution and all the money they invested, and start new? This can put your organization in a very difficult position. If you decline to maintain your system, or continue to customize it, the software becomes less and less useful. However, if the software can't up upgraded any further or the functionality doesn't exist to support a must-have workflow, discarding the current software might be the only choice.

While the majority of issues that push companies to the point of considering system change seem to relate back to users and software, our EHS&S experts also explained that some issues develop in other places and filter down to impact the users and the software.

Before embarking on a new selection, it's imperative to figure out not only what is not working, but how it got to this point. If these problems aren't identified and addressed, the disconnects will only reappear in any subsequent solution.

In the following sections, we'll explore the underlying issues that can create issues with your software experience and explain what you can do to optimize your selection process or avoid a costly system replacement altogether.

Software Selection Advice From an EHS&S Peer

The following advice is from a corporate EHS&S leader who has been through the software selection process and shared the experience with NAEM.

1. Don't look to save money on the front end because you'll likely pay for it later.
2. Focus on functionality and ease of use for users: Ask those that will use it most to be part of the evaluation and selection process.
3. Evaluate all aspects as a business case. If the system looks inexpensive determine the time and number of clicks a user needs to perform basic and other functions. Some in our organization contend that we've lost more money in transactional inefficiency than we saved in the initial purchase.
4. Dig in to the marketing message to ensure there is substance behind the messaging. Ask the software vendor(s) probing and challenging questions.

Lesson #1

Take a Close Look at Your Organizational Structure

Before you start defining requirements or scheduling demos, start by looking at your organization as a whole and all the changes it has undergone since your last software implementation.

Unexpected factors like a changing organizational focus, rapid company growth or a merger can hugely impact even the most carefully planned software solution. These changes may also impact your reporting requirements, safety data, regulations, or transparency efforts, all of which are solid reasons to reevaluate your workflows and software system.

Lesson #1

Even if your company structure hasn't changed, your software system should align well with your company's structure.

For highly decentralized companies, what works well for meeting business objectives might not work as well for aligning the EHS&S processes, data collection and reporting. Such was the case for one participant, whose company uses various legacy systems alongside dozens of individual implementations of the same commercial EHS&S software system.

“The structure is decentralized to deliberately foster independent leadership and decision-making,” the participant said, “but this makes it difficult to agree on and implement a singular strategy. Despite this, the goal is to have all EHS&S platforms report into one system. Leadership selected one system, but each division has to be convinced separately, so there are dozens of separately implemented systems. Some divisions, out of massive frustration, have already switched from the original choice to another large commercial EHS&S software solution, adding yet more complexity.

“We don’t have sufficient senior management support toward standardizing and consolidating. It goes against our company’s cultural value of independence.”

Lesson #1

It's easy to see how disparate systems could cause a company to seek a new software system, but consolidation can cause problems, too. When companies streamline their products or services, they might require fewer data gathering requirements. If the original solution was designed to accommodate many workflows that were discontinued or changed, there could be an abundance of unused functionality. This can become an issue if users need to navigate lots of extra steps to complete a single task.

It's always a balancing act to design and implement the simplest solution that is also flexible and can grow with your organization. While there's a temptation to think that more is better, if you have more functionality than you need, inefficiency and errors can result.

"Our existing system is too big for our needs," one participant explained. "[When we were shopping for a system, we found] there were many solutions available that were non-customizable. This solution, although too big, was customizable. The exception, that we learned later, is that we can't remove functionality that we aren't using."

Advice From an EHS&S Peer

"Consider your business size and that there are options for all sizes of operations. We are about 60 people and all of the common options were too complex/expensive for us. The product we ended up going with was just right."

Lesson #1

Sometimes companies don't accept how many processes they're using and design their project around their ideal state instead. Others either hope to make structural changes later, and design their solution as if it that were already the case, or they believe that a software system will force the structural change on its own. Either way, if the expected change doesn't happen, it makes it hard for the solution to perform as intended.

Is your company's organizational structure undermining your software's performance?

While unexpected factors can derail a software system, so too can underestimating the impact that internal company structure has on a data management solution.

Does your organization have a clear, top-down hierarchy? A flatter, horizontal structure with many high-level leaders? If your company has geographically diverse locations, specialized divisions, your workflows and software solution need to align with these needs or it can quickly cause significant issues.

Mergers and acquisitions may also trigger a change in your organizational structure that can introduce issues for your EHS&S data management process (and software). Such an event can require a previously decentralized company to report on new corporate priorities, or can significantly change your management systems or workflows.

Lesson #2

Scrutinize Your Own Priorities

Without exception, all past and recent survey respondents, interviewees and implementation experts all say the same thing: There is no substitute for planning, planning and more planning.

Challenge your priorities

When your existing software system was implemented, the project team outlined important tasks, defined workflows and ranked system functionality priorities as they saw them at the time. It's tempting to have a long list of "must-have" functions, but prioritizing too many items puts a big burden on the software. More than one EHS&S expert said that they realized later that they should have narrowed their list and demoted certain functions to nice-to-have or not relevant.

If the list of must-have workflows and functionality is long, it can be hard to find a single software system that can handle all of them well. Depending on how diverse the workflows and functions are, it also might require significant customization, which can have other consequences over time. Before changing to a new software tool, you might want to carefully review your priorities again.

Advice From an EHS&S Peer

"Be sure to establish or map out processes prior to creating system requirements. This will make sure the system matches how you perform your jobs, rather than forcing users to adapt their processes to the system."

When the main system at one participant's company couldn't meet all of the EHS&S needs, for example, the company sought a second system. The bolt-on solution resolved the functionality gap, which might not have existed, the participant said, had the company done a more careful job vetting their priorities upfront.

"Be absolutely sure of what the needs of the organizations are," the participant said. "Determine how many departments need to be involved and what systems and processes already exist. Ask what benefits people expect from the software and then boil those down to, say, five items per department. It's critical."

Workflows

Workflows can have the biggest impact on the effectiveness of a software system. If they aren't clearly defined, have changed or need to be eliminated, all of those factors can cause frustration.

Lesson #2

Several EHS&S experts explained that there is a fine line when defining workflows. Beware of significantly changing processes to fit the software, but don't adhere so rigidly to outdated processes that you ignore when it makes sense to refine them to integrate with the software. If you change your workflows too much and twist them to align with the software, users can resent the change if it's ultimately too different, which can lead to poor user engagement. If it doesn't work well, you also risk losing efficiency.

On the other hand, if your legacy workflow diverges so much from the basic functionality of the system, insisting on staying with it can also mean a lot of expensive initial and ongoing customization. When you are reexamining processes, look for ways to meet in the middle. One expert has seen this happen many times.

Advice From an EHS&S Peer

"Software is worthless without clear processes, workflows and ability to make fast, knowledge- based decisions based on the inputs and outputs."

"Some companies became so frustrated with the inflexibility of the software that they changed their processes to fit the tool, causing even more issues." One solution? "Customers should have some customization control and ability to modify small transactions in the system as they need to, which would cut down on customization costs."

Regardless of how well you plan, it's unlikely that a single software solution is going to thoroughly meet your every need. If you're preparing yourself to make a change, it's probably worth reexamining what your company's expectations were for the existing system. Were they too high? If you switch, what are your company's expectations for a new system? How realistic are they?

If your company's parameters demand a single system, be prepared to compromise on functionality.

Lesson #3

Enlist Champions on All Levels

While working to articulate business objectives, define processes and pick a software tool, many fail to realize the importance of communication, management of change, training, and feedback. Many issues with user frustration and lack of engagement can be traced back here.

Leadership

For any software implementation project, leadership support is crucial. When communication about the project is sent out to all levels of the company, the attitude of leadership and the reception or delivery of the communication makes a big difference. Even if top-level management won't be personally using the software, if they are engaged, knowledgeable and openly supportive, that enthusiasm filters downward.

Such was the case at one participant's company, where strong leadership support was a key to a successful fast-tracked implementation.

"We implemented in six weeks. Corporate is very collaborative, rolls out consistent processes, and is centralized and cohesive," the EHS&S leader said.

Communication and Training

Training addresses where the user's job role and workflows intersect. It's easy to overlook training, but many user issues can be traced directly back to it.

One common — but effective — tactic is to position the system as a tool to make the user's job easier. Users should understand how the system impacts their everyday work, and how gathering and entering this data impacts the company's bottom line.

"We made an efficiency argument to get users to embrace the new system and we had very little pushback," one participant said. "When you show how the system can save time and money, it makes users excited and happy. We invest time in training and offer help so employees understand how to use it and are comfortable."

Ongoing Support

In your efforts to promote your system, however, it's important to be receptive to critical feedback from users. Oftentimes concerns about the cost of customizations hold organizations back from making changes soon after going live. But, it's still important to understand the user experience and track those issues over time so you can decide whether it is serious enough to warrant a fix. If there isn't a plan in place for follow-up right away, even small issues can grow into big problems.

And don't wait until users are complaining. As one EHS&S leader explained, successful implementations include a continual user engagement strategy to remain attuned to the user experience, even when there are no issues.

"We survey stakeholders continuously, taking their temperature to make adjustments as necessary in response to user feedback and process tweaks," the participant said.

Lesson #4

Invest the Right Resources in the Selection Process

If your existing software system has become ineffective, you might question whether your company how it was selected and what criteria were used to make that decision. If you're committed to finding a new software solution what should you do or avoid doing this time around?

Lesson #4

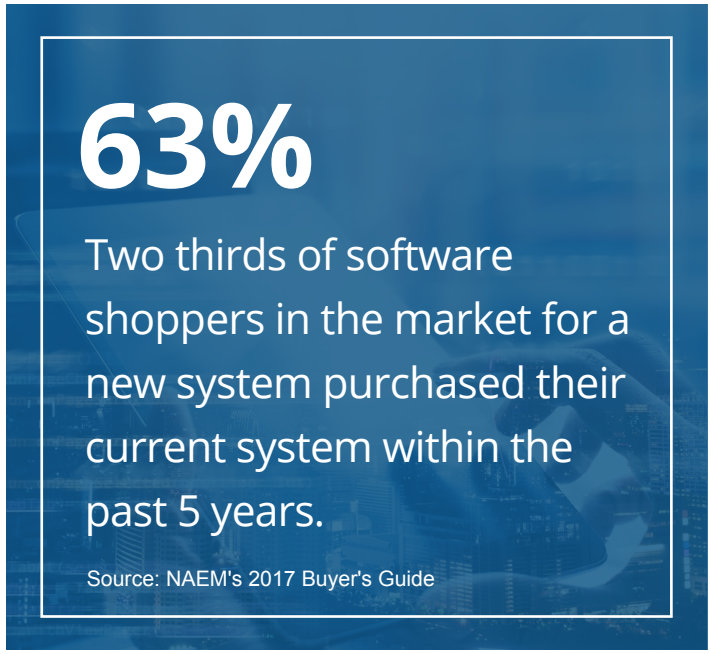
While smaller systems may be configured and supported by a third-party, more of the larger EHS&S software systems come along with a vendor. Either way, it's important to remember that you aren't just selecting a software system (or systems), but an implementation partner.

For those who complain that their systems don't perform as they expected them to, the software implementation consultants said it's important to examine those expectations and take the time to carefully evaluate system functionality upfront.

Now that more companies have experience with EHS&S software and vendors, our experts say you should ask around. Do research on the backgrounds and experience of the people who would be on your implementation partner and vendor project team. Talk to other companies about their experiences with similar data problems and different vendors and software.

One expert's client negotiated with the vendor for a test application so they could try out their own workflows in a copy of the system to see how they worked before investing. This isn't common or open to all customers, but that doesn't mean you shouldn't ask, the expert said.

"Why not try to negotiate for it? And keep asking questions. It's fairly atypical for customers to get software companies to agree if they can't deliver. If companies can deliver, it's a good indication that the solution will work."



Integration and Data Flow

When taking stock of company structure, include all systems that the EHS&S software might need to interface with. Then ask the vendor or implementation partner how the software integrates with other IT systems, with other EHS&S systems, and with future systems your company might implement. They might integrate directly or import / export data, but the flow of information between systems has to be quick and very easy.

Parting Thoughts

Deciding to switch software is a big decision, but many companies find themselves in this position. The good news is that EHS&S software space has evolved considerably in recent years, to address the functionality needs of those who are seeking new solutions. Those who have been through a selection process in the past are also better informed on how their internal management affects the performance of their chosen system. If you do decide to make a switch you have the opportunity to benchmark with your peers, structure your selection process and prioritize your requirements and invest in a system that matches your company's needs, now and into the future.

Advice From an EHS&S Peer

"Look for a software that is very flexible and a company that is willing to make low cost modifications...There is no software that will provide the perfect solution to your individual needs so partnering with a company that is well established, in it for the long haul, and willing to work with you to provide the solutions you are looking for is key."

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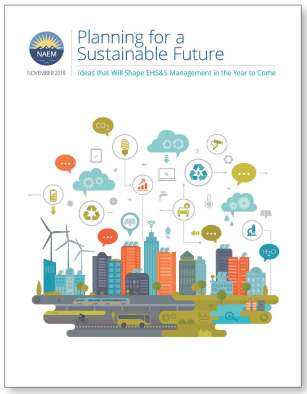
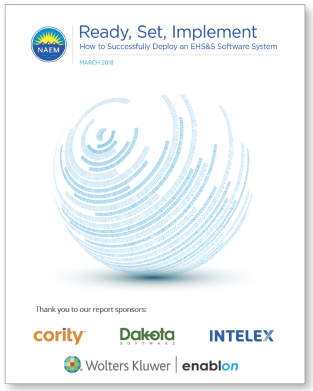


Planning for a Sustainable Future

NAEM's 2018 trends report identifies the initiatives and emerging ideas that are shaping the EHS&S agendas of companies today. The report provides a behind-the-scenes look at the latest ideas companies are putting into practice to advance their EHS &S programs.

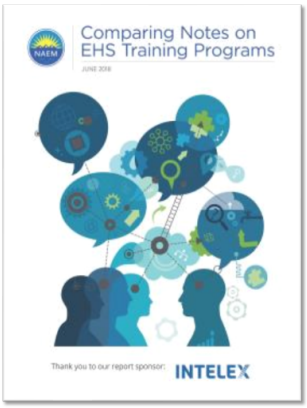


Ready, Set, Implement: How to Successfully Deploy an EHS&S Software System

NAEM's Ready, Set, Implement: How to Successfully Deploy an EHS&S Software System report is based on in-depth interviews with corporate EHS&S professionals and implementation partners, who have decades of experience deploying software systems on a global scale.

The EHS&S Tech Transformation

At companies of all sizes, across every industry sector, the internet of things (IOT) is revolutionizing how the environment, health and safety, and sustainability (EHS&S) function collects data, designs programs and manages the impact of operations in real time. This report provides a roadmap of the key technologies that are influencing change.



Comparing Notes on EHS Training Programs

What are the strategies your peers are using to engage employees and build EHS culture? What training methods are the most effective? And how do you measure whether your training is working? Download the report today to find out how your programs stack up.